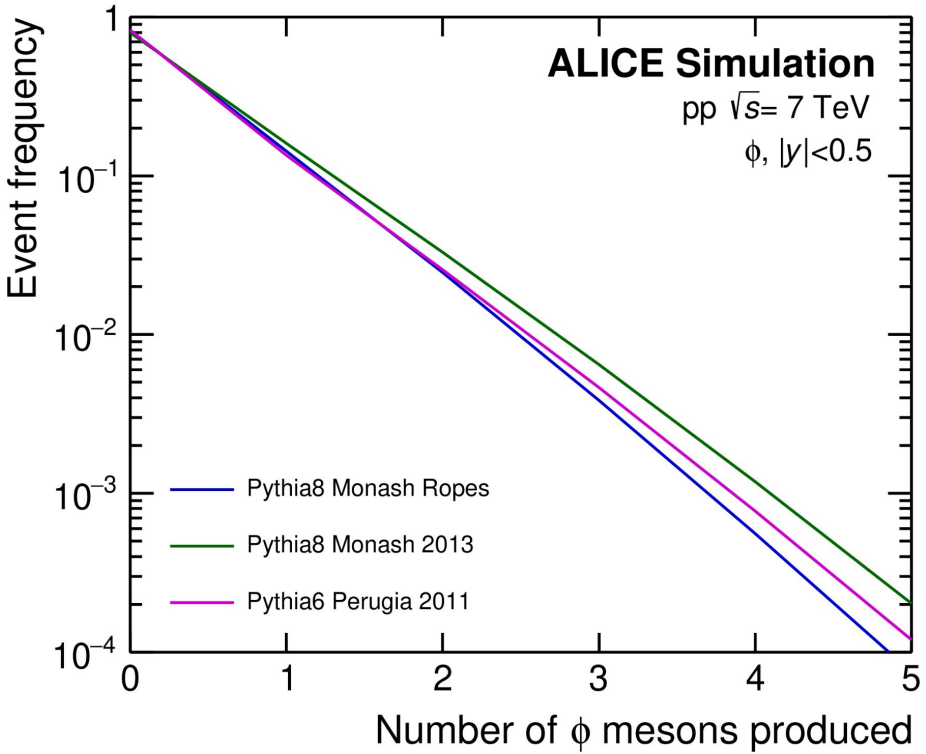
Yields and derived quantities



ALI-SIMUL-510293

$\langle Y_\phi \rangle$ Inclusive ϕ meson production

$\langle Y_{\phi\phi} \rangle$ Inclusive ϕ-meson pair production

$$\mu_\phi = \langle Y_\phi \rangle$$

Average of produced ϕ-meson

$$\sigma^2_\phi = 2\langle Y_{\phi\phi} \rangle + \langle Y_\phi \rangle - \langle Y_\phi \rangle^2$$

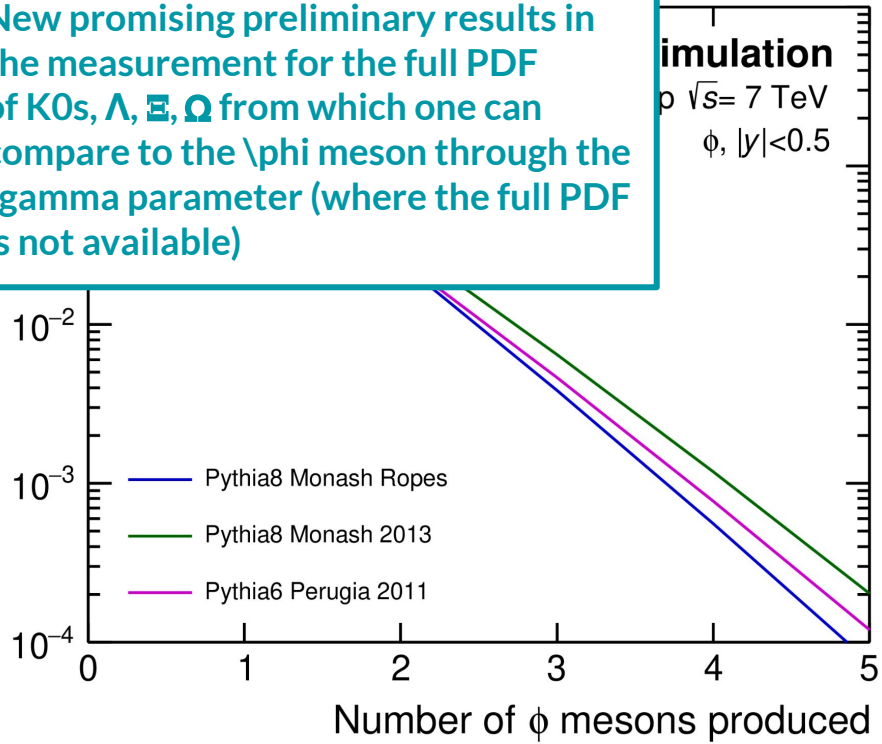
Variance of produced ϕ-mesons

$$\gamma_\phi = \frac{\sigma^2_\phi}{\mu_\phi} - 1 = 2\frac{\langle Y_{\phi\phi} \rangle}{\langle Y_\phi \rangle} - \langle Y_\phi \rangle$$

New way to characterise production

Yields and derived quantities

New promising preliminary results in the measurement for the full PDF of K0s, Λ, Ξ, Ω from which one can compare to the \phi meson through the \gamma parameter (where the full PDF is not available)



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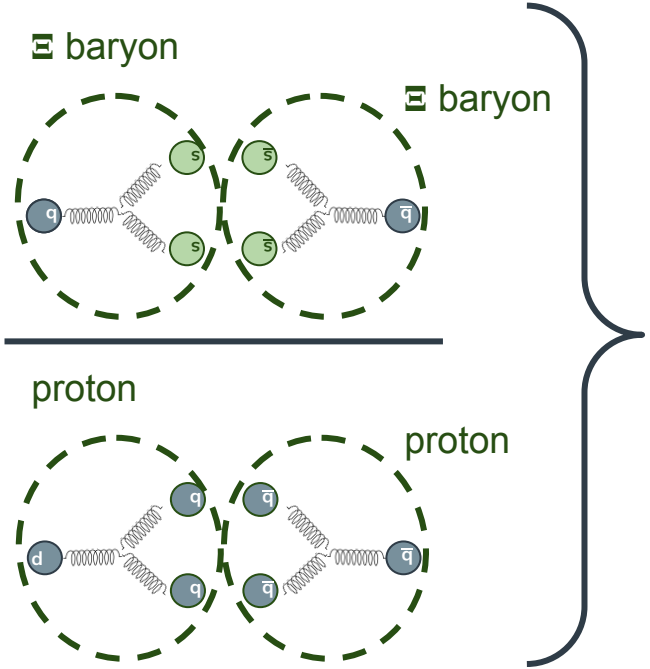
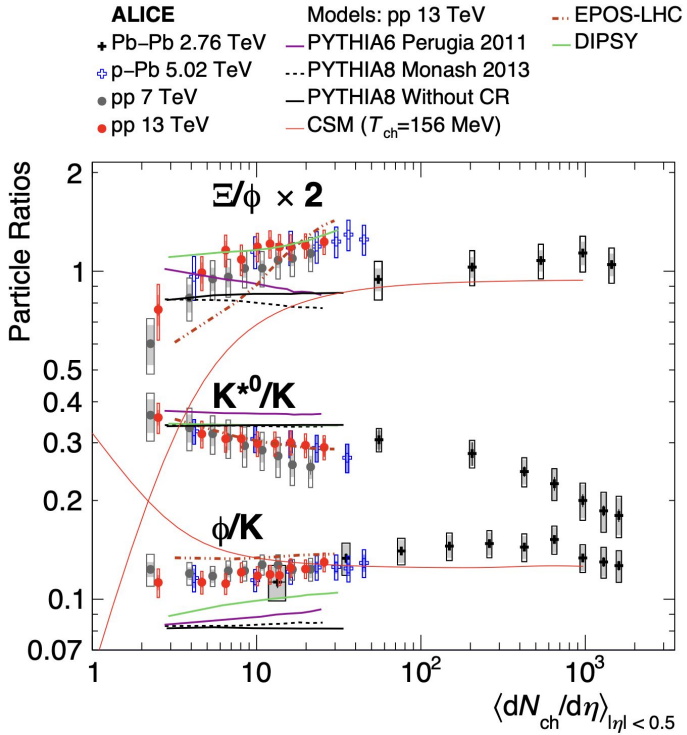
New way to characterise production

Then what can we do to keep pushing the boundaries for the understanding of how the strangeness is produced?



If we can measure the correlated yield and take this ratio, we may be even sensitive to the ratio in di-quark breaking probability from qq to ss

Exploring the multiplicity dependence we can probe the effect in a multi-source env. w/ MPI



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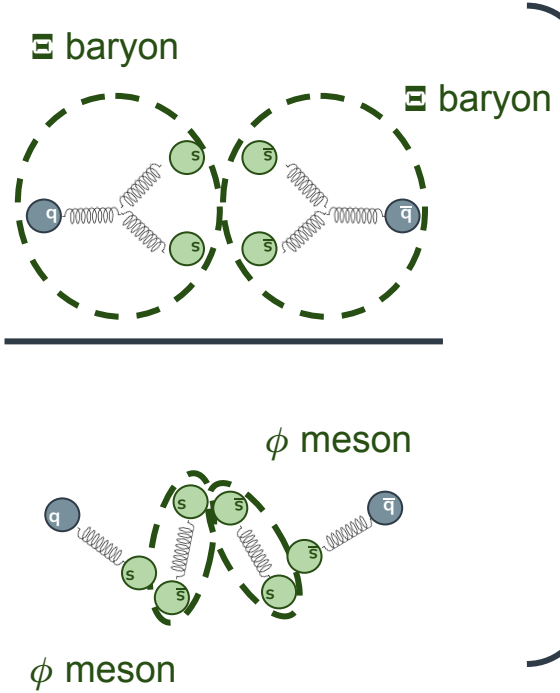
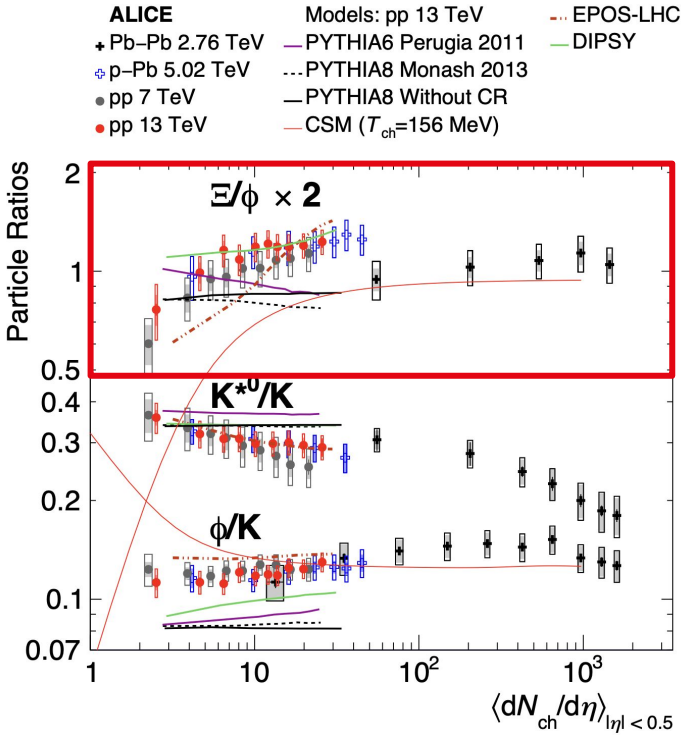


We can extend this ratio to understand if it's ~1 also for the general pair production (is the Xi w.r.t. to the Phi produced mainly one at the time or more in pairs? i.e. in Lund is p_ss^3 > p_di-ss)



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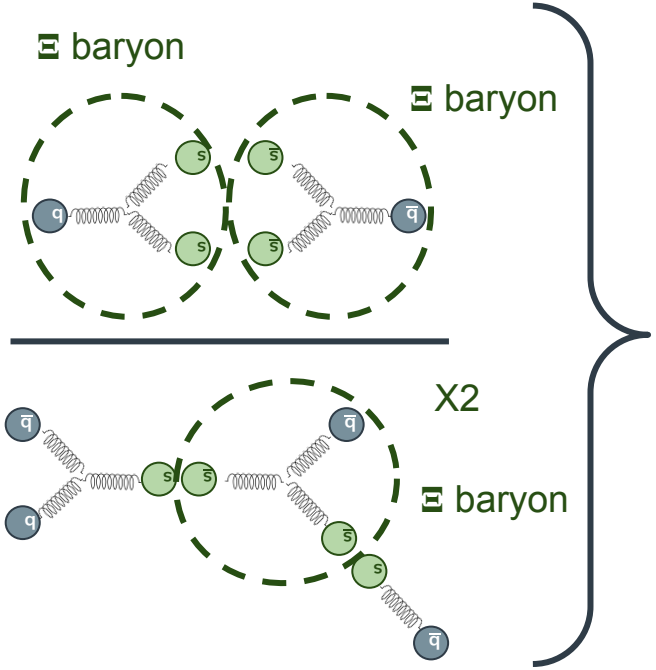
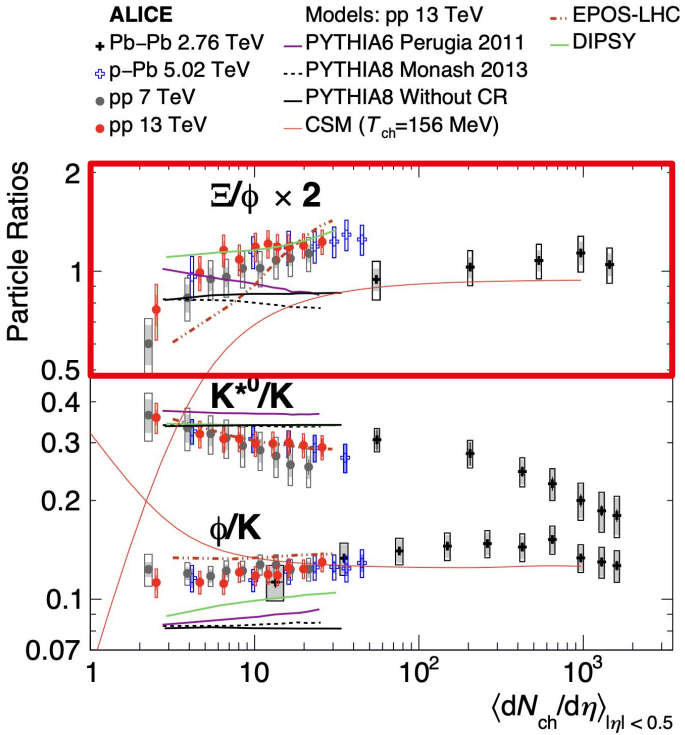


We can measure the fraction of the pair production that is correlated, sensitive to the "Pythia" component, w.r.t. the "Thermal" component



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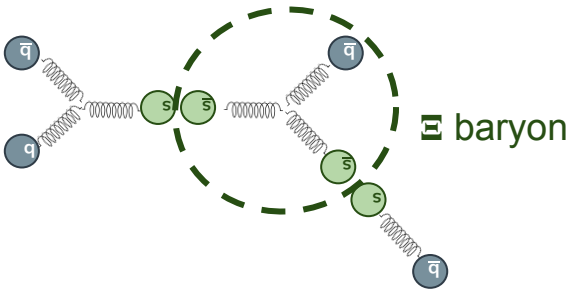

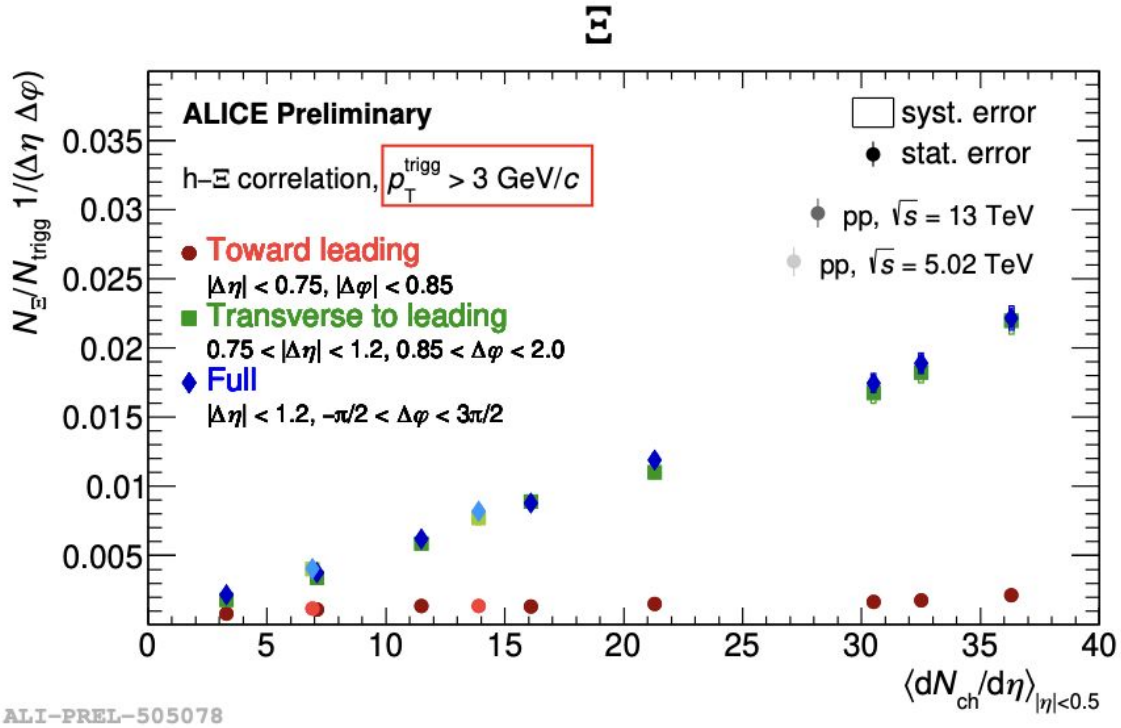

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